Claims

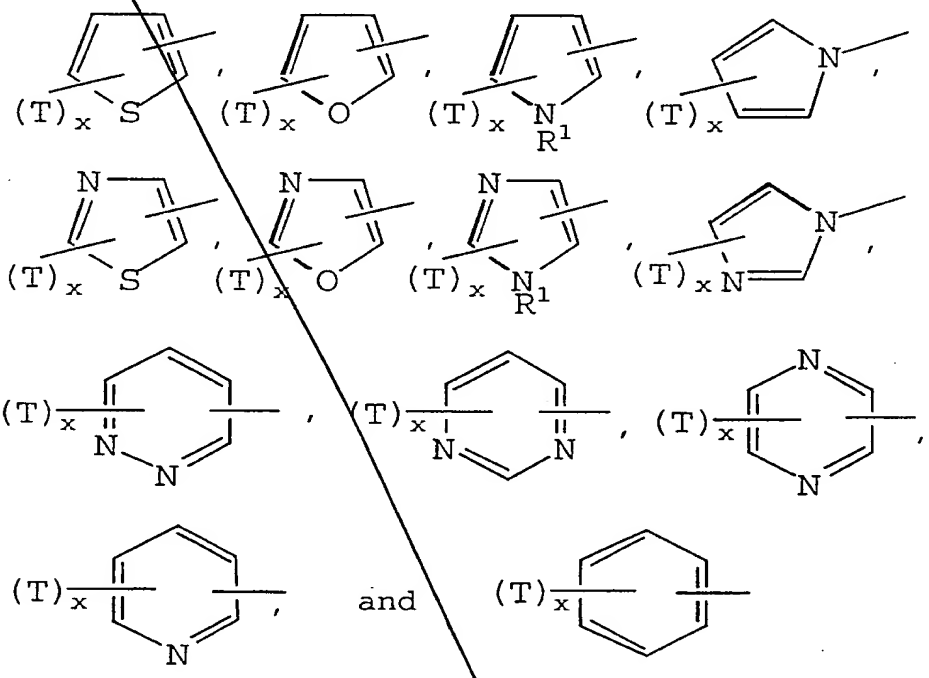
A Method of using

1. ~~Use of~~ compounds the generalized formula (I):

$$(T)_xA\text{-}B\text{-}D\text{-}E\text{-}CO_2H \quad (I)$$

wherein

(a) $(T)_xA$ represents a substituted or unsubstituted aromatic or heteroaromatic moiety selected from the group consisting of:



wherein R^1 represents H or alkyl of 1 - 3 carbons; and

each T represents a substituent group, independently selected from the group consisting of:

* the halogens -F, -Cl, -Br, and -I;
* alkyl of 1 - 10 carbons;
* haloalkyl of 1 - 10 carbons;
* haloalkoxy of 1 - 10 carbons;

* alkenyl of 2 - 10 carbons;
* alkynyl of 2 - 10 carbons;
* $-(CH_2)_pQ$, wherein
  p is 0 or an integer 1 - 4,
* -alkenyl-Q, wherein
  said alkenyl moiety comprises 2 - 4 carbons, and
* -alkynyl-Q , wherein
  said alkynyl moiety comprises 2 - 7 carbons; and

Q is selected from the group consisting of aryl of 6 - 10 carbons, heteroaryl comprising 4 - 9 carbons and at least one N, O, or S heteroatom, -CN, -CHO, $-NO_2$, $-CO_2R^2$, $-OCOR^2$, $-SOR^3$, $-SO_2R^3$, $-CON(R^4)_2$, $-SO_2N(R^4)_2$, $-C(O)R^2$, $-N(R^4)_2$, $-N(R^2)COR^2$, $-N(R^2)CO_2R^3$, $-N(R^2)CON(R^4)_2$, $-CHN_4$, $-OR^4$, and $-SR^4$;

wherein

R^2 represents H;
  alkyl of 1 - 6 carbons;
  aryl of 6 - 10 carbons;
  heteroaryl comprising 4 - 9 carbons and at least one N, O, or S heteroatom; or
  arylalkyl in which the aryl portion contains 6 - 10 carbons and the alkyl portion contains 1 - 4 carbons; or
  heteroaryl-alkyl in which the heteroaryl portion comprises 4 - 9 carbons and at least one N, O, or S heteroatom and the alkyl portion contains 1 - 4 carbons;

R^3 represents alkyl of 1 - 4 carbons;
  aryl of 6 - 10 carbons;

heteroaryl comprising 4 - 9 carbons and at least one N, O, or S heteroatom; or

arylalkyl in which the aryl portion contains 6 - 10 carbons and the alkyl portion contains 1 - 4 carbons; or

heteroaryl-alkyl in which the heteroaryl portion comprises 4 - 9 carbons and at least one N, O, or S heteroatom and the alkyl portion contains 1 - 4 carbons;

R^4 represents H;

alkyl of 1 - 12 carbons;

aryl of 6 - 10 carbons;

heteroaryl comprising 4 - 9 carbons and at least one N, O, or S heteroatom;

arylalkyl in which the aryl portion contains 6 - 10 carbons and the alkyl portion contains 1 - 4 carbons;

heteroaryl-alkyl in which the heteroaryl portion comprises 4 - 9 carbons and at least one N, O, or S heteroatom and the alkyl portion contains 1 - 4 carbons;

alkenyl of 2 - 12 carbons;

alkynyl of 2 - 12 carbons;

$-(C_qH_{2q}O)_rR^5$ wherein q is 1-3; r is 1 - 3; and R^5 is H provided q is greater than 1, or alkyl of 1 - 4 carbons, or phenyl;

alkylenethio terminated with H, alkyl of 1-4 Carbons, or phenyl;

alkyleneamino terminated with H, alkyl of 1-4 carbons, or phenyl;

$-(CH_2)_sX$ wherein s is 1 - 3 and X is halogen;

$-C(O)OR^2$; or

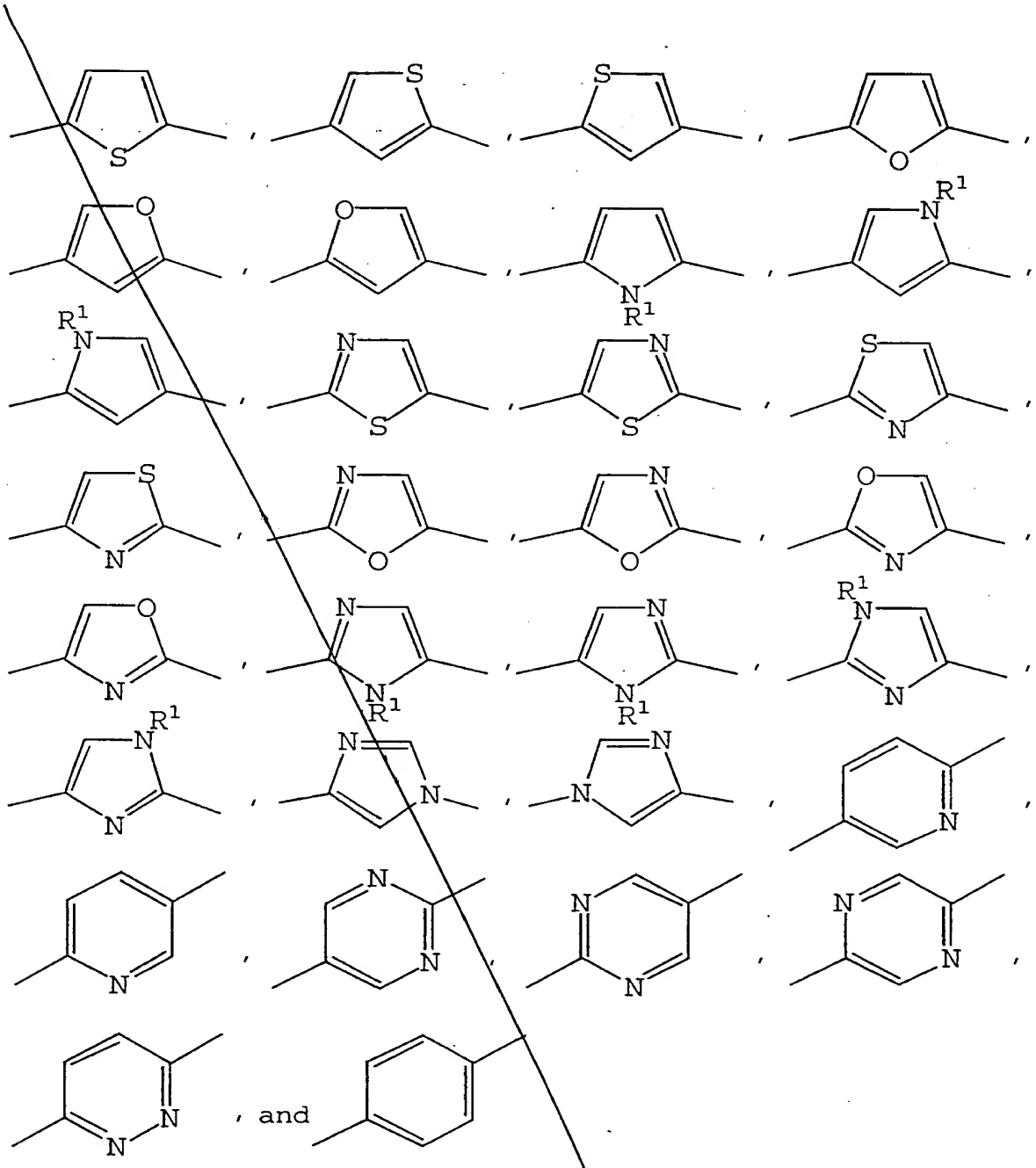
$-C(O)R^2$;

and with the provisos that a) when two R^4 groups are situated on a nitrogen, they may be joined by a bond to form a heterocycle, and

b) unsaturation in a moiety which is attached to Q or which is part of Q is separated from any N, O, or S of Q by at least one carbon atom, and

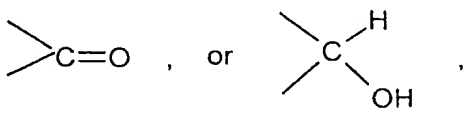
x is 0, 1, or 2;

(b) B represents a bond or an optionally substituted aromatic or hetero-aromatic ring containing 0-2 substituents T, which substituents T may independently have the meaning specified under (a), the B rings being selected from the group consisting of:



wherein R^1 is as defined above and each R^1 may be the same or different:

(c) D represents



(d) E represents a chain of n carbon atoms bearing m substituents R^6, wherein said R^6 groups are independent substituents, or constitute spiro or nonspiro rings in which a) two groups R^6 are joined, and taken together with the chain atom(s) to which said two R^6 group(s) are attached, and any intervening chain atoms, constitute a 3 - 7 membered ring, or b) one group R^6 is joined to the chain on which said one group R^6 resides, and taken together with the chain atom(s) to which said R^6 group is attached, and any intervening chain atoms, constitutes a 3 - 7 membered ring; and wherein

Sub B'

n is 2 or 3;

m is an integer of 1 - 3;

each group R^6 is independently selected from the group consisting of:

* fluorine;

* hydroxyl, with the proviso that a single carbon may bear no more than one hydroxyl substituent

* alkyl of 1 - 10 carbons;

* aryl of 6 - 10 carbons;

* heteroaryl comprising 4 - 9 carbons and at least one N, O, or S heteroatom;

* arylalkyl wherein the aryl portion contains 6 - 10 carbons and the alkyl portion contains 1 - 8 carbons;

* heteroaryl-alkyl wherein the heteroaryl portion comprises 4 - 9 carbons and at least one N, O, or S heteroatom, and the alkyl portion contains 1 - 8 carbons;

* alkenyl of 2 - 10 carbons;

* aryl-alkenyl wherein the aryl portion contains 6 - 10 carbons and the alkenyl portion contains 2 - 5 carbons;

* heteroaryl-alkenyl wherein the heteroaryl portion comprises 4 - 9 carbons and at least one N, O, or S heteroatom and the alkenyl portion contains 2 -5 carbons;

* alkynyl of 2 - 10 carbons;

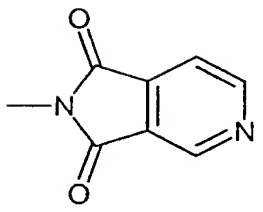
* aryl-alkynyl wherein the aryl portion contains 6 - 10 carbons and the alkynyl portion contains 2 - 5 carbons;

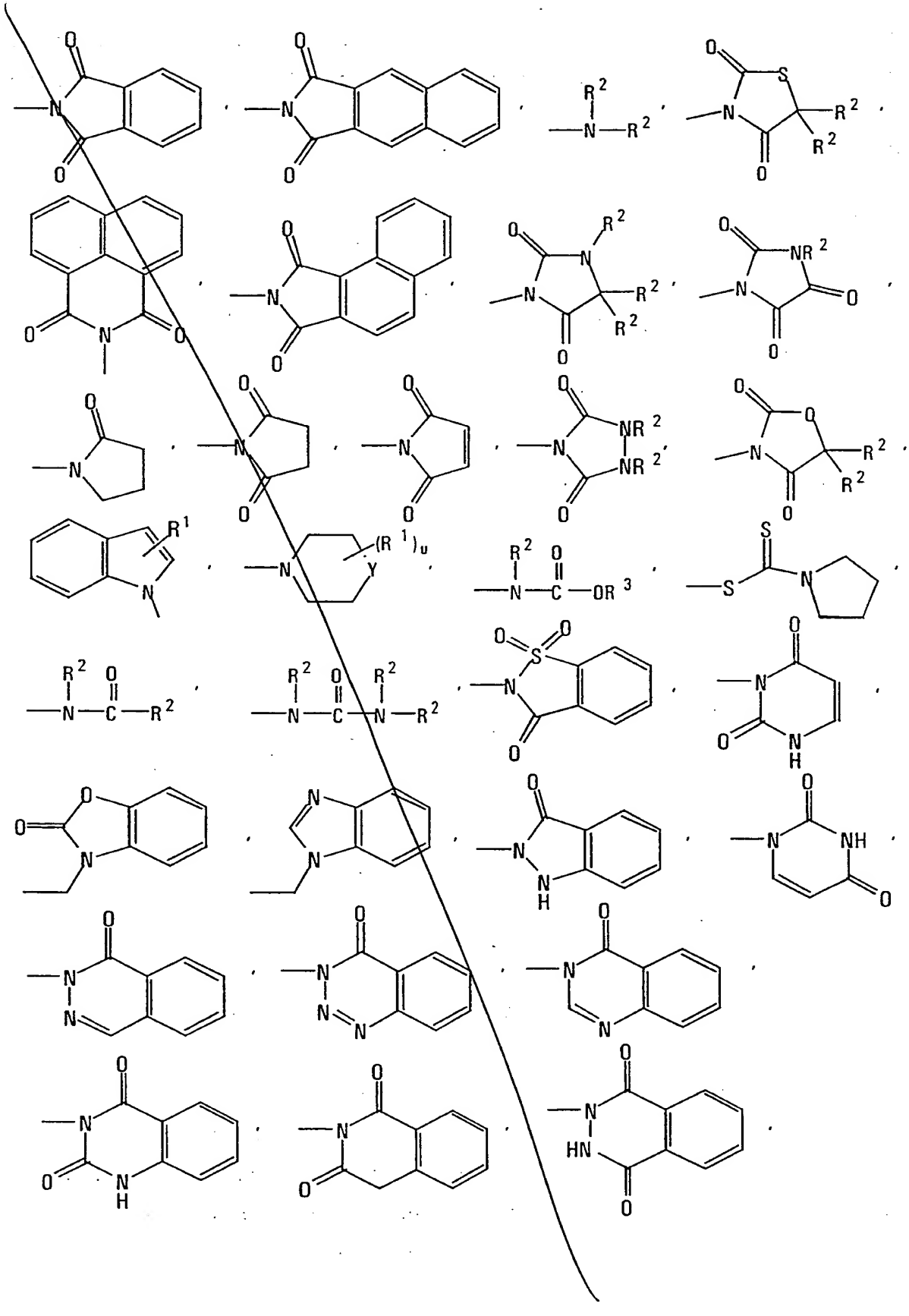
* heteroaryl-alkynyl wherein the heteroaryl portion comprises 4 - 9 carbons and at least one N, O, or S heteroatom and the alkynyl portion contains 2 - 5 carbons;

* $-(CH_2)_tR^7$ wherein

t is 0 or an integer of 1 - 5; and

R^7 is selected from the group consisting of





and corresponding heteroaryl moieties in which the aryl portion of an aryl-containing R^7 group comprises 4 - 9 carbons and at least one N,.O, or S heteroatom;

wherein

Y represents O or S;

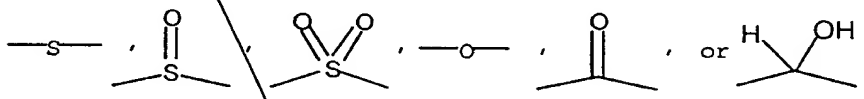
R^1, R^2, and R^3 are as defined above and each R^1, R^2 or R^3 may be the same or different; and

u is 0, 1, or 2; and

* $-(CH_2)_vZR^8$ wherein

v is 0 or an integer of 1 to 4; and

Z represents



;

R^8 is selected from the group consisting of:

alkyl of 1 to 12 carbons;

aryl of 6 to 10 carbons;

heteroaryl comprising 4 - 9 carbons and at least one N, O, or S heteroatom;

arylalkyl wherein the aryl portion contains 6 to 10 carbons and the alkyl portion contains 1 to 4 carbons;

heteroaryl-alkyl wherein the aryl portion comprises 4 - 9 carbons and at least one N, O, or S heteroatom and the alkyl portion contains 1 - 4 carbons;

$-C(O)R^9$ wherein R^9 represents alkyl of 2 - 6 carbons, aryl of 6 - 10 carbons, heteroaryl comprising 4 - 9 carbons and at least one N, O, or S heteroatom, or arylalkyl in which the aryl portion contains 6 - 10 carbons or is heteroaryl comprising 4 - 9

carbons and at least one N, O, or S heteroatom, and the alkyl portion contains 1 - 4 carbons;

and with the provisos that

- when R^8 is $-C(O)R^9$, Z is S or O;
- when Z is O, R^8 may also be $-(C_qH_{2q}O)_rR^5$ wherein q, r, and R^5 are as defined above; and

* $-(CH_2)_wSiR^{10}{}_3$ wherein

w is an integer of 1 to 3; and

R^{10} represents alkyl of 1 to 2 carbons;

and with the proviso that

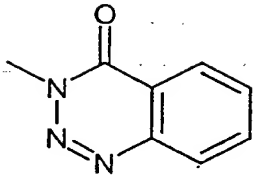
- aryl or heteroaryl portions of any of said T or R^6 groups optionally may bear up to two substituents selected from the group consisting of $-(CH_2)_yC(R^4)(R^3)OH$, $-(CH_2)_yOR^4$, $-(CH_2)_ySR^4$, $-(CH_2)_yS(O)R^4$, $-(CH_2)_yS(O)_2R^4$, $-(CH_2)_ySO_2N(R^4)_2$, $-(CH_2)_yN(R^4)_2$, $-(CH_2)_yN(R^4)COR^3$, $-OC(R^4)_2O-$ in which both oxygen atoms are connected to the aryl ring, $-(CH_2)_yCOR^4$, $-(CH_2)_yCON(R^4)_2$, $-(CH_2)_yCO_2R^4$, $-(CH_2)_yOCOR^4$, -halogen, -CHO, $-CF_3$, $-NO_2$, -CN, and $-R^3$, wherein

y is 0 - 4; and

R^3 and R^4 are defined as above, and each R^3 or R^4 may be the same or different; and any two R^4 which are attached to one nitrogen may be joined to form a heterocycle;

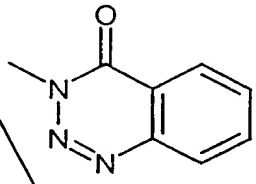
and pharmaceutically acceptable salts and prodrugs thereof ~~for the manufacturing of drugs~~ for the treatment and prevention of cerebral diseases.

2. ~~Use of~~ Method of using compounds of the generalized formula (I) according to claim 1, wherein R^6 is $-(CH_2)_tR^7$, in which t is 0 or an integer 1-5, and R^7 is a group of the formula



and pharmaceutically acceptable salts and prodrugs thereof ~~for the manufacturing of drugs~~ for the treatment of cerebral diseases.

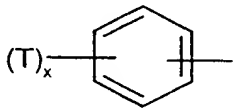
3. ~~Use of~~ compounds of the general formula (I) according to claim 1, wherein E represents a chain of 2 carbon atoms bearing 1 substituent R^6, and wherein R^6 is $-(CH_2)_tR^7$, in which t is 0 or an integer 1-5, and in which R^7 is a group of the formula



and pharmaceutically acceptable salts and prodrugs thereof ~~for the manufacturing of drugs~~ for the treatment of cerebral diseases.

4. ~~Use of~~ compounds of the generalized formula (I) according to claim 1, wherein

(a) $(T)_XA$ represents a the group of the formula



wherein

T represents a substituent group, independently selected from the group consisting of:

* the halogens -F, -Cl, -Br, and -I;
* alkyl of 1 - 10 carbons;
* $-(CH_2)_pQ$, wherein

p is 0 or an integer 1 - 4, and

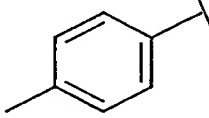
Q is $-OR^4$,

wherein

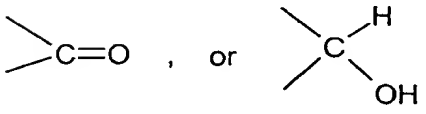
R^4 represents alkyl of 1 - 12 carbons;

x is 0, 1, or 2;

(b) B represents a group of the formula:



(c) D represents



(e) E represents a group of the formula $-CH_2-CHR^6-$,

wherein

R^6 is a group of the formula $-(CH_2)_tR^7$,

wherein

t is 0 or an integer of 1 - 5; and

R^7 is a group of the formula

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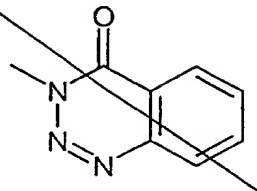

and with the proviso that the aryl portion of said R^6 group optionally may bear up to two substituents selected from the group consisting of -halogen, -CHO, $-CF_3$, $-NO_2$, and -CN,

A and pharmaceutically acceptable salts and prodrugs thereof ~~for the manufacturing of drugs~~ for the treatment and prevention of cerebral diseases.

A 5. ~~Use according to any of claims 2 to 4,~~ Method according to claim 2 wherein the compound of the general formula (I) is an alkali metal salt or an alkaline earth metal salt.

A 6. ~~Use according to any of claims 2 to 5,~~ Method according to claim 2 wherein the compound of the general formula (I) is a sodium salt.

A 7. ~~Use according to any of claims 2 to 6,~~ Method according to claim 2 wherein the application is parenteral.

A 8. ~~Use according to any of claims 2 to 6,~~ Method according to claim 2 wherein the application is intravenous.

A 9. Alkali metal salt or alkaline earth metal salt of a compound of the general formula (I) according to ~~any of claims 2 to 4.~~ claim 2

10. 4-(4'-Chloro-biphenyl-4-yl)-4-oxo-4H-benzo[d][1,2,3]triazin-3-yl)ethyl]-butyric acid sodium.

11. Pharmaceutical composition comprising at least one compound according to claim 9 or 10.

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